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VIDEO KALEIDOSCOPE

PERSONAL DEVELOPMENT

Turn your designs into graphic extravaganza
(ages 4 and up)

by **Raymond Weir**

Requires: ATARI BASIC Language Cartridge

One ATARI Joystick Controller

Diskette version (1):
(APX-20213)

ATARI 810 Disk Drive
40K RAM

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Edition A

VIDEO KALEIDOSCOPE

by

Raymond Weir

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Table of contents

Introduction...1

Overview...1

Required accessories...1

Optional accessories...1

Contacting the author...1

Getting started...2

Loading VIDEO KALEIDOSCOPE into computer memory...2

The first display screen...2

Using VIDEO KALEIDOSCOPE...3

Program options...3

Demonstration design...3

Instructions...4

Draw a new design...4

Run the kaleidoscope...5

Change offsets...5

Storing your designs...7

Advanced technical information...9

Quick reference sheet...10

Table of figures

1 First display screen...2

2 Special function menu...3

3 Change offsets...7

Introduction

OVERVIEW

VIDEO KALEIDOSCOPE allows you to introduce a young child to the world of computer graphics, or to show off the graphics capabilities of your ATARI Home Computer. Children as young as four can enjoy creating elaborate, colorful, whirling pictures that go far beyond the simple image mirroring of traditional kaleidoscopes.

VIDEO KALEIDOSCOPE has two parts. First you use a joystick to draw a simple or complex design. You can vary the speed to create quick designs or very precise ones. The design repeats in the four quadrants of the screen as you draw. Then a press of the START key begins the kaleidoscope. Pressing each letter and number key causes a different special effect, such as rotating rainbows, color flashes and pulses, alternating patterns, graduated spectrums, a freeze-frame effect, and a continuation of the design development. The longer you let your design develop, the more complex it becomes. You can change colors at will, selecting soothing pastels, brilliant hues, or a combination. If you create a particularly pleasing design, you can store it on a diskette and recall it another time.

REQUIRED ACCESSORIES

ATARI BASIC Language Cartridge
ATARI Joystick Controller
40K RAM
ATARI 810 Disk Drive

OPTIONAL ACCESSORIES

Diskettes for storing designs

CONTACTING THE AUTHOR

Users wishing to contact the author may write to him at:

6916 100th Ave.
Lanham, Maryland 20706

Getting started

LOADING VIDEO KALEIDOSCOPE INTO COMPUTER MEMORY

1. Insert the ATARI BASIC Language Cartridge in the cartridge slot of your computer.
2. Plug your Joystick Controller into the first controller jack of your computer console.
3. Have your computer turned OFF.
4. Turn on your disk drive.
5. When the BUSY light goes out, open the disk drive door and insert the VIDEO KALEIDOSCOPE diskette with the label in the lower right-hand corner nearest to you. Close the door. (Use disk drive one if you have more than one drive.)
6. Turn on your computer and your TV set. The program will load into computer memory and start automatically.

THE FIRST DISPLAY SCREEN

When the program has loaded into computer memory, the following screen appears:

VIDEO KALEIDOSCOPE

By Raymond Weir

Dedicated to my daughters Cammie and
Bonnie who like pretty pictures

Figure 1 First display screen

In just a moment, this message replaces the first display screen:

PRESS OPTION FOR FUNCTIONS
PRESS START TO DRAW A DESIGN

Using VIDEO KALEIDOSCOPE

PROGRAM OPTIONS

If you're ready to start drawing a picture right away, press the START key. (Refer to the section below entitled "DRAW A NEW DESIGN".)

Press the OPTION key to choose the functions menu. The following screen appears:

SPECIAL FUNCTION MENU

- A) STORE DESIGN ON DISK
- B) RECALL A DESIGN FROM DISK
- C) RUN THE DEMO DESIGN
- D) DELETE A DESIGN FROM DISK
- E) RUN THE KALEIDOSCOPE
- F) DRAW A NEW DESIGN
- G) DISPLAY INSTRUCTIONS
- H) CHANGE OFFSETS

Figure 2 Special function menu

DEMONSTRATION DESIGN

Try running the demonstration design to see how VIDEO KALEIDOSCOPE works. Type C, and after a short wait, the program creates a design automatically. Then the kaleidoscope begins.

Change the colors as often as you like by pressing the OPTION key.

While the kaleidoscope is in action, try typing any letter of the alphabet or any number from 0 through 9, and watch the special effects.

Press the SELECT key and the program starts drawing that design over again. If you've typed one of the letters that produce a rainbow background (4, 5, or Y), and you press the SELECT key, you replace the design with a bright rainbow.

To see the program draw a new design, press the START key.

INSTRUCTIONS

Type G to see abbreviated instructions for using VIDEO KALEIDOSCOPE. After you've read each of the two screens, press any key to continue. The program returns you to the choice between drawing a design and seeing the special function menu.

DRAW A NEW DESIGN

From the special function menu, type F. A blinking cursor appears in the center of the screen. If you want to start drawing your design somewhere other than the center, move the joystick to reposition the cursor.

When you're ready to begin drawing, press the red joystick button. Then when you move the joystick about, a line appears on the screen following the direction of the joystick. The line moves in all four quadrants of the screen, so your design is always symmetrical. For example, try moving the joystick to the left when the cursor is in the upper left hand quadrant of the screen. The lines in the upper and lower left quadrants move to the left while the lines in the right quadrants move to the right at the same time.

To draw with a dotted line, hold the red joystick button down while you're moving the joystick. To reposition the cursor on the screen, press the joystick button once and move the joystick to the new location. When you press the red button again, you can draw a line.

If you draw a line in one direction and then move the joystick back to retrace your path, you erase the line you drew (leaving only a dot behind).

Press the OPTION key while you're drawing to change the colors on the screen as often as you like.

You can change the speed of your drawing by typing numbers from 1 through 9. To draw fast, type a low number. To slow down the drawing speed, type a higher number. Use the slower speeds for very accurate fine resolution drawing.

You don't have to draw a complicated design to produce a pretty display. It shouldn't take more than a minute to create a simple design of just a few lines. Experiment to improve your drawing technique. Remember that a short display runs faster when you run the kaleidoscope than a long, detailed display.

When you finish drawing a design, press the START key to begin the kaleidoscope.

RUN THE KALEIDOSCOPE

When you've drawn your design, you're ready to run the kaleidoscope. If you finish drawing and press the START key, the kaleidoscope runs immediately. But if you returned to the special function menu, or if you're using a design that you've loaded from another diskette, this option is the way to run the kaleidoscope. Type E and watch the kaleidoscope begin.

If you type E without a design in computer memory, the program just returns you to the special function menu.

Each of the number and letter keys on the computer console produces a special effect of its own. For example, type Y to see bright rainbow bands behind your design. Type 4 to see brightly colored bands move up, and 5 to see them move down. Experiment by typing one key after another and seeing all of VIDEO KALEIDOSCOPE's special effects.

Press the OPTION key to change the colors. Try pressing it again and again to see the full range of possible colors, until you get a pleasing combination.

Sometimes if the kaleidoscope runs for a long time, the design becomes too complicated. Press the SELECT key and the program starts to run a new configuration from the initial drawing. If you press a key that freezes the action (for example, A or I) and then press the SELECT key, the program erases the screen. Press the SPACE BAR to restart the drawing.

When you've finished running the kaleidoscope, press the START key. You see the choice to draw a new design or return to the special function menu.

CHANGE OFFSETS

Offsets determine how far your design moves vertically and horizontally on the screen. They're measured by numbers from 0 through 3. The program has set them both at 1 unless you change them. Offsets of 0 aren't recommended, because your design just blinks on and off. To vary your designs, experiment with the offsets and compare the results. Type H, and the following instructions appear:

INPUT THE HORIZONTAL AND
VERTICAL OFFSETS

OFFSETS ARE IN THE RANGE 0-3

PRESENT VALUE OF OFFSETS

VERTICAL OFFSET 1

HORIZONTAL OFFSET 1

PRESS OPTION TO CHANGE OFFSETS
PRESS START TO RUN KALEIDOSCOPE

Figure 3 Change offsets

If you decide not to change the offsets, just press the START key. To change them, press the OPTION key. The following messages appear to help you:

NEW VERTICAL OFFSET

?

NEW HORIZONTAL OFFSET

?

Type the number of your choice and press the RETURN key for each offset. Then press the START key to try it out.

STORING YOUR DESIGNS

You can store a design on a separate diskette and run it again later. First draw a design that you like. Run the kaleidoscope to test it, and press the START key. When the special function menu (Figure 2) appears, type A.

If there's no design in computer memory, the program prompts you as follows:

LOAD OR DRAW A DESIGN FIRST

Either load a file you've already stored, or draw a new design.

The following message appears at the bottom of the special function menu:

WHAT FILE NAME
?

Remove the program diskette from the disk drive and insert a blank formatted diskette. Type a file name (up to eight letters or numbers, the first of which must be a letter) and press the RETURN key. When the program has finished storing your design, it returns to the special function menu.

Later, if you want to recall a design you've already stored, type B. The program asks "WHAT FILE NAME?" Before answering, remove the program diskette and insert the diskette your design is stored on. Then type the name of your design and press the RETURN key. The design loads into computer memory and the kaleidoscope begins.

You can also delete a design you've stored on the diskette. Type D from the special function menu. The program asks "WHAT FILE NAME?" Before you answer, remove the program diskette and insert the diskette the design is stored on. Then type the file name and press the RETURN key. When the program finishes deleting the design, you see the special function menu again.

Advanced technical information

VIDEO KALEIDOSCOPE uses ATARI graphics mode 7+. This mode gives 160 by 192 resolution with four colors. It's not supported by BASIC. To show the many colors you see on the screen at once, the display list is modified to support display list interrupts. When an interrupt is received, the colors are changed. Another technique to get many colors involves changing the colors every scan line as in special effects mode 1. To do this, the hardware color resistors are changed and then the program waits for the next television horizontal synch.

Quick reference sheet

<u>Key</u>	<u>Function</u>
Numbers	Change cursor drawing speed; Special background and color changes when kaleidoscope is running
Letters	Special background and color changes when kaleidoscope is running
OPTION	Changes colors
START	Starts the kaleidoscope; Returns to special function menu from kaleidoscope
SELECT	Restarts kaleidoscope; Erases screen when kaleidoscope is frozen
SYSTEM RESET	Reloads program
SPACE BAR	Starts drawing when screen is frozen



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Review Form

We're interested in your experiences with APX programs and documentation, both favorable and unfavorable. Many of our authors are eager to improve their programs if they know what you want. And, of course, we want to know about any bugs that slipped by us, so that the author can fix them. We also want to

know whether our instructions are meeting your needs. You are our best source for suggesting improvements! Please help us by taking a moment to fill in this review sheet. Fold the sheet in thirds and seal it so that the address on the bottom of the back becomes the envelope front. Thank you for helping us!

1. Name and APX number of program.

2. If you have problems using the program, please describe them here.

3. What do you especially like about this program?

4. What do you think the program's weaknesses are?

5. How can the catalog description be more accurate or comprehensive?

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program:

- _____ Easy to use
- _____ User-oriented (e.g., menus, prompts, clear language)
- _____ Enjoyable
- _____ Self-instructive
- _____ Use (non-game programs)
- _____ Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

8. What did you especially like about the user instructions?

9. What revisions or additions would improve these instructions?

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

11. Other comments about the program or user instructions:

From

STAMP



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